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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/047,787	01/16/2002	Bertrand Dorfman	ZETEK P-3	5605

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EXAMINER	
PEREZ, ANGELICA	

ART UNIT	PAPER NUMBER
2684	3

DATE MAILED: 05/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/047,787	DORFMAN, BERTRAND	
	Examiner	Art Unit	
	Angelica M. Perez	2684	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 January 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-18* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-18* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2. Claims 1-6 are rejected under 35 U.S.C. 102(e) as being anticipated by Arai (Arai et al., US Patent No.: 6,061,579 A).

Regarding claim 1, Arai teaches of a personal portable phone (figure 4(a), item 10) having an ear piece (figure 4(b); where the earpiece is located in the front upper side of the front surface of the telephone that faces the head of the user), the antenna improvement comprising: a first directional antenna positioned longitudinally displaced from the ear piece (figure 4(a); where the antenna is longitudinally displace in relation to the earpiece), the first directional

antenna providing a predetermined conical electromagnetic energy radiation pattern (figure 6(a); column 5, lines 31-36), the conical pattern being positioned so that when a user places the ear piece against the user's ear, the conical pattern will substantially miss the head of the user (figure 4(b); column 2, lines 6-13; where a purpose of the invention includes the avoidance of where the patch antenna radiation creates a pattern going downwards and/or downwards that substantially avoids the head of the user).

Regarding claim 2, Arai teaches all the limitations of claim 1. Arai further teaches where the first directional antenna is a patch type antenna (figure column 3, lines 16-20).

Regarding claim 3, Arai teaches all the limitations of claim 2. Arai further teaches where an antenna base mounted to slide along the ear piece from a retracted position to a protracted position (figure 4(b), items 12 and 13; where the "deployment element, antenna plate" protracts form its retracted position), the first directional antenna being mounted on the antenna base (figure 4(b), items 12 and 13; column 3, lines 17-20), when the phone is in state to be used, the antenna base is in a protracted position to provide ready user access to the ear piece and the directional antenna is longitudinally displaced from the ear piece (figure 4(b), items 12 and 13; where when the telephone is in use, the antenna is in a protracted position).

Regarding claim 4, Arai teaches all the limitations of claim 3. Arai further teaches where the patch type antenna has an inoperative position flush with the face of the base when the base is in the retracted position and has an operative

position perpendicular to the base when the base is in the protracted position (column 2, lines 51-61).

Regarding claim 5, Arai teaches all the limitations of claim 1. Arai also teaches where the axis of the cone is parallel to the plane of the ear piece (figure 4(b); where the axis of the cone radiation goes parallel to the plane of the earpiece).

Regarding claim 6, Arai teaches all the limitations of claim 1. Arai also teaches where the cone is a circular cone having an included angle of about 30° to 60° (column 5, lines 26-36; e.g., "between 36 and 60 degrees").

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 7-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Arai in view of Iwai (Iwai et al.; US Publication No.: 6,731,920 B1).

Regarding claim 7, Arai teaches all the limitations of claim 1.

Arai does not teach of a second directional antenna adjacent to the first antenna on the antenna base, the second antenna providing a predetermined conical electromagnetic energy radiation pattern propagating in a direction substantially 180° from the direction in which the conical electromagnetic radiation pattern propagates from the first antenna.

In related art concerning a portable telephone apparatus control method, Iwai teaches of a second directional antenna adjacent to the first antenna on the antenna base, the second antenna providing a predetermined conical electromagnetic energy radiation pattern propagating in a direction substantially 180° from the direction in which the conical electromagnetic radiation pattern propagates from the first antenna (figure 16, items 102 and 103; columns 16 and 17, lines 54-67 and 1-26, respectively; column 18, lines 18-54).

It would have been obvious to a one of ordinary skill in the art at the time the invention was made to combine Arai's deployable device with Iwai 's adjacent directional antennas in order to provide gain increase that provides stronger radiating directivity away from the user with enhanced quality of communication.

Regarding claim 8, Arai in view of Iwai teaches all the limitations of claim 7. Arai further teaches where an antenna base mounted to slide along the ear piece from a retracted position to a protracted position (figure 4(b), items 12 and 13; where the "deployment element, antenna plate" protracts form its retracted position), the first directional antenna being mounted on the antenna base (figure 4(b), items 12 and 13; column 3, lines 17-20), when the phone is in state to be used, the antenna base is in a protracted position to provide ready user access to the ear piece and the directional antenna is longitudinally displaced from the ear piece (figure 4(b), items 12 and 13; where when the telephone is in use, the antenna is in a protracted position).

Regarding claim 9, Arai in view of Iwai teaches all the limitations of claim 8. Arai also teaches where the antennas have an inoperative position flush with

the face of the base when the base is in the retracted position and have an operative position perpendicular to the base when the base is the protracted position (column 2, lines 51-61).

Regarding claim 10, Arai in view of Iwai teaches all the limitations of claim 9. Arai also teaches where when the first and second antennas are in the operative position, they are substantially co-planar and where the plane of the antennas is perpendicular to the plane of the base (figure 16, items 102, 103, 102b and 103 b; where the antennas, 102 and 103, are parallel to the base pin 102b and 103b).

Regarding claim 11, Arai in view of Iwai teaches all the limitations of claim 7. Arai also teaches wherein the axes of the cones are parallel to the plane of the ear piece (figure 4(b); where the axis of the cone radiation goes parallel to the plane of the earpiece).

Regarding claim 12, Arai in view of Iwai teaches all the limitations of claim 11. Arai further teaches where the cones are circular cones each having an included angle of about 30° to 60°(column 5, lines 26-36; e.g., "between 36 and 60 degrees").

Regarding claim 13, Arai in view of Iwai teaches of a personal portable phone (figure 4(a), item 10) having an ear piece (figure 4(b); where the earpiece is located in the front upper side of the front surface of the telephone that faces the head of the user), the antenna improvement comprising: a first directional antenna positioned longitudinally displaced from the ear piece (figure 4(a); where the antenna is longitudinally displace in relation to the earpiece), the first

directional antenna providing a predetermined conical electromagnetic energy radiation pattern (figure 6(a); column 5, lines 31-36), the conical pattern being positioned so that when a user places the ear piece against the user's ear, the conical pattern will substantially miss the head of the user (figure 4(b); column 2, lines 6-13; where a purpose of the invention includes the avoidance of where the patch antenna radiation creates a pattern going downwards and/or downwards that substantially avoids the head of the user). Iwai further teaches of a first and second patch type directional antennas (figure 16, items 102 and 103).

Regarding claims 14 and 15, Arai in view of Iwai teaches of a personal portable phone (figure 4(a), item 10) and a method (column 2, lines 45-52) having an ear piece (figure 4(b); where the earpiece is located in the front upper side of the front surface of the telephone that faces the head of the user), the antenna improvement comprising: each of the directional antennas providing a predetermined conical electromagnetic energy radiation pattern propagating in substantially opposite directions (figure 16, items 102 and 103; e.g., antennas can be rotated to opposite directions from each other), the conical patterns having axes parallel to the plane of the ear piece (figure 4(b); where the axis of the cone radiation goes parallel to the plane of the earpiece), having an included angle of about 30° and positioned so that, when a user places the ear piece against the user's ear, the conical patterns will substantially miss the head of the user°(column 5, lines 26-36; e.g., "36 degrees" is "about 30"; figure 4(b); column 2, lines 6-13; where a purpose of the invention includes the avoidance of where the patch antenna radiation creates a pattern going downwards and/or

downwards that substantially avoids the head of the user). Iwai further teaches of a first and second patch type directional antennas positioned longitudinally displaced from the ear piece and longitudinally displaced from each other (figure 16, items 102 and 103).

Regarding claim 16, Arai in view of Iwai teaches all the limitations of claim 15. Iwai further teaches of providing a second directional antenna positioned adjacent to the first antenna and also longitudinally displaced from the ear piece (figure 16, items 102 and 103), transmitting electromagnetic energy from the antenna in a second predetermined conical pattern having a second axis that is substantially parallel to the first axis of the first antenna (figure 16, items 102 and 103; where the axis are parallel to each other), the second conical pattern being positioned so that when a user places the ear piece against the user's ear, the second conical pattern will substantially miss the head of the user (column 18, lines 38-48).

Regarding claim 17, Arai in view of Iwai teaches all the limitations of claim 16. Iwai also teaches where the steps of transmitting energy from the first and second antennas are in directions substantially 180° opposed to one another (column 17, lines 15-25).

Regarding claim 18, Arai in view of Iwai teaches all the limitations of claim 16. Arai also teaches where the first and second conical patterns each have an included angle of about 30° (column 5, lines 26-36; e.g., "36 degrees" is "about 30").

Conclusion

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Angelica Perez whose telephone number is 703-305-8724. The examiner can normally be reached on 7:15 a.m. - 3:55 p.m., Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nay Maung can be reached on 703-308-7745. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the TC 2600's customer service number is 703-306-0377.

Angelica Perez
(Examiner)

NAY MAUNG
SUPERVISORY PATENT EXAMINER

Art Unit 2684

May 17, 2004